Slide 1

Concerns about 10 digit number system

Reliability and sustainment

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Slide 2
Agenda

- Need for FCC leadership
- VRS Provider Responsibility
- Central Database Operation
- Dial by Number or Name (URL)
- Number acquisition and conservation
- Number distribution

Slide 3
Need for FCC Leadership

- FCC must lead the way and force standardization
- Market is not going to reach consensus…very competitive
- FCC must define minimum provider requirements…
  - Number issuance requires IP address updating
- Define the Central database
  - Creation, access and query methods
  - Maintenance and change control
  - Method for adopting to new technology
- Effective method for enforcing interoperability
- Ability to adopt to rapidly changing technology
  - H.323 => SIP
  - Cell Phones becoming video phones
  - Mobility is understanding modality

Slide 4
VRS Provider Responsibility

- Every Provider that issues a number must have "system" to keep the central database always updated
- Having another Provider updating the IP address is…not reliable
- Numbering is expected to be highly reliable

Slide 5
Why Providers must have a system to update the IP address

- Number is issued by Provider A…video phone registers with Provider B…what happens when
  - Provider B has problems and doesn't update the Central database
  - Provider B goes off the air…disaster or bankruptcy
  - If Provider B starts telling the relay user that the only way to have a reliable number is to get it from them
- The only way to overcome this…Provider must
  - Provide a "system" (software or hardware) to track IP address
  - Be responsible for updating the IP address in the central database

Slide 6
Central Database Operation

- Central database development…extensive work needed
  - Definition
    - What information does it contain
    - How is it stored
  - Operation
    - Loading and maintaining information in the database
      - Add, change and delete processes
      - Access security and control
    - Reliability, redundancy and continuous operation
    - Change control process
  - Query process
    - Procedures
    - Information returned
  - Security
    - 11 to 15 Provider databases feeding the central Database…11 to 15 avenues for attack!!!

Slide 7
Dial by Number or Name (URL)

- Database must be future ready
- Support query returning multiple addresses
  - IP for H.323 video phones
  - URL for

        - SIP video phones
        - IM clients for IP Relay
        - Text clients for cell phones
        - Video clients in cell phones (3G enabled)
- Many current videophone must use URL

Slide 8
Number Acquisition and Conservation

- Wholesale carriers – VoIP networks
- Number blocks
    - 200 numbers per rate center
    - 1000 rate centers
    - 11 to 15 relay providers
    - 2.2M to 3.0M numbers set aside for 200,000 relay users
- E9-1-1 comes with numbers
- 11 to 15 E9-1-1 systems

Slide 9
Number Distribution

- Relay user certification process
- Verification process – how many numbers
- Provider universal access
- Freedom of provider choice for Relay user
- Providers must have access to directly update central database